EA Form R 1/2007

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. **Applicant/Contact name and address:**

   EVAN & MARLA SHAW
   2723 FAIRMONT ST
   DALLAS, TX 75201-1912

2. **Type of action:** Surface Water Application for Beneficial Water Use Permit 76LJ 30154763

3. **Water source name:** Whitefish River (Whitefish Lake)

4. **Location affected by project:** Government Lot 4, N2NWSE Section 22, Township 31N, Range 22W, Flathead County, Montana.

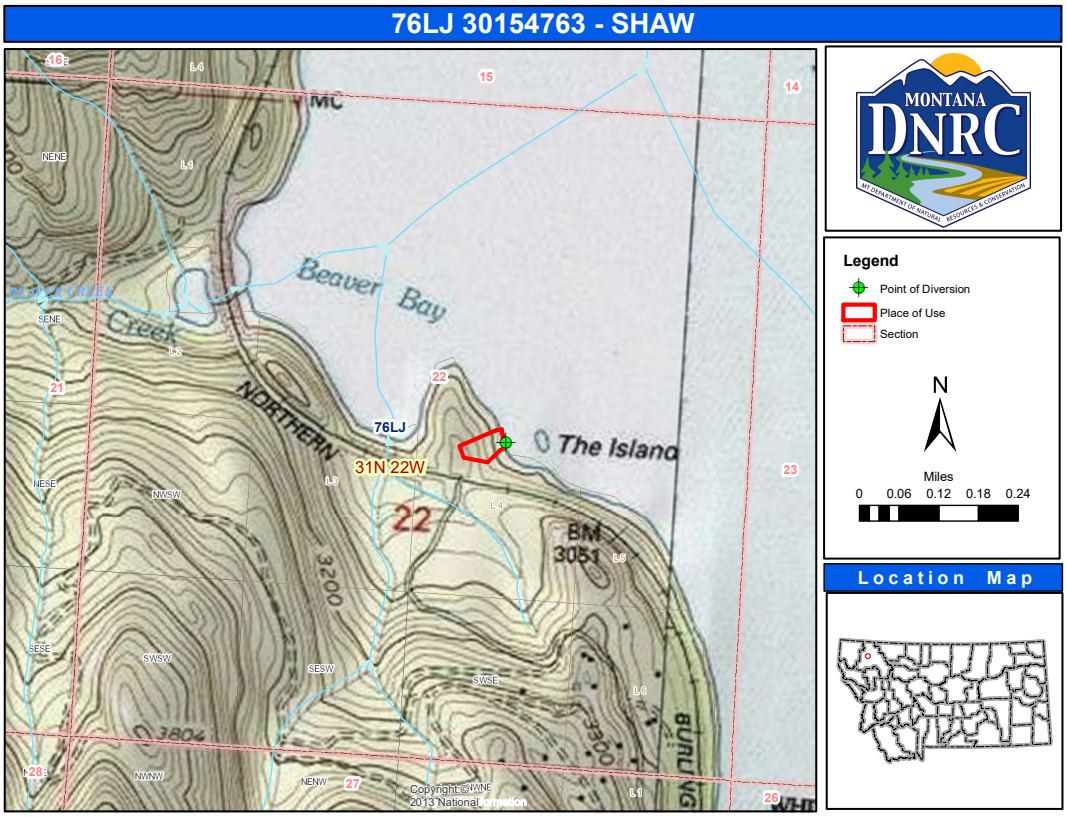

Figure 1. Map of the proposed place of use and point of diversion.

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

Applicant proposes to divert water from the Whitefish River (Whitefish Lake), hereafter Whitefish Lake, using a pump. Applicant requests a 29.4 GPM flow rate up to an annual volume of 2.33 AF for domestic use (1.0 AF) and for irrigation of 0.65 acres of lawn and garden (1.33 AF). Domestic use will occur from January 1 – December 31 and lawn and garden irrigation will occur from April 15 – October 15 annually. The point of diversion (POD) and place of use is located in Government Lot 4, NWNWSE Section 22, Township 31N, Range 22W, Flathead County, Montana (Figure 1). The place of use is further described as Tract 1 of Certificate of Survey No. 20546. The POD is in the Upper Flathead River Basin (76LJ), in an area not subject to water right basin closures or controlled groundwater area restrictions.

The DNRC shall issue a water use permit if the applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:

- U.S. Fish and Wildlife Service (USFWS): National Wetlands Inventory Wetlands Mapper
- Montana Natural Heritage Program: Endangered, Threatened Species, and Species of Special Concern
- Montana Department of Fish Wildlife & Parks (MTDFWP): Dewatered Stream Information
- Montana Department of Environmental Quality (MTDEQ): Clean Water Act Information Center
- U.S. Natural Resources Conservation Service (NRCS): Web Soil Survey

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity **-** *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The Applicant will divert water from Whitefish Lake, which is not on the MTDFWP list of chronically or periodically dewatered streams.

Determination: No significant impact.

Water quality **-** *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

According to the MTDEQ 2020 Clean Water Act Information Center Water Quality Information, Whitefish Lake is listed as "fully supporting" for: primary contact recreation, agriculture, and aquatic life. The aquatic life use is "threatened," with the probable causes being mercury and polychlorinated biphenyls. Whitefish lake has not been assessed for the drinking water beneficial use. The lake's Use Class is "A-1," meaning the waters are classified as suitable for drinking, culinary, and food processing purposes after conventional treatment for removal of naturally present impurities. The Water Quality Category is "5," meaning the lake's waters have one or more beneficial use impaired or threatened, and a total maximum daily load (TMDL) plan is required to address the factors causing the impairment or threat. The proposed project will not affect water quality of Whitefish Lake.

Determination: No significant impact.

Groundwater **-** *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: N/A, this project diverts from a surface water source.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Applicant will divert water from Whitefish Lake at a maximum rate of 29.4 GPM using a Franklin Electric model 25SDQP 2.0-HP 4-inch submersible pump controlled by a Franklin Electric SubDrive 20 variable frequency drive (VFD). The VFD will be set to ensure a constant system operating pressure of approximately 45 pounds per square inch (psi) in order to meet variable demands. The pump will include a check-valve and will be located 60-feet offshore within a plastic flow sleeve approximately 15-feet below the low-water elevation. A 1-inch high density polyethylene (HDPE) supply line will convey water 125-feet from the pump to a Flex2Pro H2P vertical pressure tank within the residence basement. After the pressure tank, water flows through 0.75-inch copper piping and through a sediment filter and a Viqua Ultraviolet Light disinfection system before distribution to household fixtures. Just outside the residence, the supply line will "T" to supply the irrigation control system valve distribution boxes. From the valve box, Hunter 1-inch PGV valves will distribute water to each of the 11 irrigation zones (seven spray and four drip zones) through 1-inch HDPE lines.

The irrigation system is comprised of Hunter PGP-ADJ #4 nozzle sprinklers, Hunter Pro-Spray #4A nozzle sprinklers, MSBN-1 OF Pop-up stream bubblers, PRS30 2Q-6Q and MSBN-10F umbrella bubblers, MP(UR)CS515 corner strip, MPSS530 side strip, and HE-10-8 and HE-60-8 point source drip emitters. The operating pressure for each sprinkler ranges from 30-45 psi, which results in a max flow of approximately 1.5 gpm per sprinkler (Hunter PGP-ADJ #4 nozzle) covering a pre-determined radius for adequate coverage for each sprinkler head. The irrigation system is designed for a maximum demand of 9.0 GPM per zone. Only one zone will operate at any given time. A Hunter Pro-C multi-zone irrigation control system will regulate the irrigation schedule to achieve sufficient irrigation sets for each zone. Times of operation may

overlap with water use within the residence (20.4 GPM; see Beneficial Use section below) therefore, the total requested flow rate is equal to 29.4 GPM.

The total dynamic head (TDH) of the system during peak demand is 190-feet, based on:

i. The minimum system operating pressure of 45-psi (equivalent to 104-feet of head);

ii. A 32-foot elevation gain from Whitefish Lake's surface to the pressure tank; and,

iii. The friction losses in the 1.0-inch HDPE supply line at 29.4 GPM (equivalent to 54-feet of head).

The pump can produce in excess of 29.4 GPM at 190-feet TDH based on the applicant-provided system specifications, though the maximum diverted flow rate will be limited/controlled by the VFD. This flow rate will allow the Applicant to supply their water system at peak demand at an adequate operating pressure. The Department finds the system capable of producing and distributing the requested flow rate of 29.4 GPM and annual volume of 2.33 AF.

This project will not create any channel impacts, flow modifications, barriers, dams, or riparian impacts to Whitefish Lake, nor will it affect any wells.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species **-** *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants, aquatic species, or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program website was reviewed to determine if there are any threatened or endangered fish, wildlife, plants, aquatic species, or any "species of special concern" in Township 31N, Range 22W that could be impacted by the proposed project. 21 animal and 12 plant species of concern (Tables 1 and 2, respectively) were identified within the township and range where the project is located. Of these species, the Grizzly Bear (*Ursus arctos*), Canada Lynx (*Lynx canadensis*), and the Bull Trout (*Salvelinus confluentus*) are listed as threatened by the USFWS. An adequate quantity of water will still exist in the surface water source to maintain existing populations of Bull Trout, should they exist there currently. This area is already highly developed, and it is not anticipated that any species of concern will be further impacted by the proposed project.

Table 1. Animal Species of Concern			
Canada Lynx (*Lynx canadensis*)	Bobolink (*Dolichonyx oryzivorus*)	Fisher (*Pekania pennanti*)	Pygmy Whitefish (*Prosopium coulteri*)
Hoary Bat (*Lasiurus cinereus*)	Brown Creeper (*Certhia americana*)	Grizzly Bear (*Ursus arctos*)	Sheathed Slug (*Zacoleus idahoensis*)
Little Brown Myotis (*Myotis lucifugus*)	Bull Trout (*Salvelinus confluentus*)	Northern Alligator Lizard (*Elgaria coerulea*)	Varied Thrush (*Ixoreus naevius*)
Long-eared Myotis (*Myotis evotis*)	Cassin's Finch (*Haemorhous cassinii*)	Pacific Wren (*Troglodytes pacificus*)	Westslope Cutthroat Trout (*Oncorhynchus clarkii lewisi*)
Long-legged Myotis *(Myotis volans)*	Common Loon (*Gavia immer*)	Pileated Woodpecker (*Dryocopus pileatus*)	Yuma Myotis *(Myotis yumanensis)*
Wolverine (*Gulo gulo*)			

Table 2. Plant Species of Concern			
Beck Water-marigold (Bidens beckii / Megalodonta beckii)	*Crested Shieldfern (Dryopteris cristata)*	*Gray Lungwort Lichen (Lobaria hallii)*	*Panic Grass (Dichanthelium acuminatum)*
Coville Indian Paintbrush (Castilleja covilleana)	*Dense-flower Rein Orchid (Piperia elongate)*	*Kalm's Lobelia (Lobelia kalmii)*	*Slender Cottongrass (Eriophorum gracile)*
Creeping Sedge (Carex chordorrhiza)	*Giant Helleborine (Epipactis gigantea)*	*Nagoonberry (Rubus arcticus)*	*Watershield (Brasenia schreberi)*

Determination: No significant impact.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: N/A, project does not involve wetlands.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: N/A, project does not involve ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE **-** *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

The proposed 0.65 acres of lawn and garden irrigation will not negatively impact the soil quality, stability, or moisture content. The soil type in the project area is an Andeptic Cryoboralfs-Andic Cryochrepts complex, hilly formed from glacial till and material derived from metasedimentary rock parent material. This soil has moderately low to moderately high capacity to transmit water. Soils in this area are not likely susceptible to saline seep.

Determination: No significant impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

This area is already developed, and any existing native vegetation has already been disturbed. It is not anticipated that issuance of a water use permit will contribute to the establishment or spread of noxious weeds in the project area. Noxious weed prevention and control will be the responsibility of the landowners, who must follow local noxious weed regulations.

Determination: No significant impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

There will be no impact to air quality associated with issuance of the proposed permit for beneficial use of surface water.

Determination: No significant impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: N/A, project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water, and energy not already addressed.*

All impacts to land, water, and energy have been identified. No further impacts are anticipated.

Determination: No significant impact.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is consistent with planned land uses.

Determination: No significant impact.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter, or impair access to present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities. The proposed place of use and diversion do not exist on land designated as wilderness.

Determination: No significant impact.

HUMAN HEALTH - *Assess whether the proposed project impacts human health.*

This proposed use will not adversely impact human health.

Determination: No significant impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: No impact.
OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? None identified.

(*b) Local and state tax base and tax revenues?* None identified.

(c) Existing land uses? None identified.

(*d) Quantity and distribution of employment?* None identified.

(e) Distribution and density of population and housing? None identified.

(f) Demands for government services? None identified.

(g) Industrial and commercial activity? None identified.

(h) Utilities? None identified.

(i) Transportation? None identified.

(j) Safety? None identified.

(k) Other appropriate social and economic circumstances? None identified.

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: None identified.

Cumulative Impacts: None identified.

3. ***Describe any mitigation/stipulation measures:***

None.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

The only alternative to the proposed action would be the no action alternative. The no action alternative would not authorize the diversion of water from Whitefish Lake.

Part III. Conclusion

1. Preferred Alternative

Issue a water use permit if the Applicants prove the criteria in 85-2-311 MCA are met.

2. Comments and Responses

None.

3. Finding:
*Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

No significant impacts related to the proposed project have been identified.

Name of person(s) responsible for preparation of EA:

Name: Travis Wilson
Title: Water Resource Specialist
Date: April 1, 2022